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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/701,059 | 11/03/2003 | Shoji Suzuki | 004085.P037 | 5504 |

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EXAMINER

TUPPER, ROBERT S

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/701,059 | SUZUKI ET AL. | |
| | Examiner | Art Unit | |
| | Robert S. Tupper | 2652 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-64 is/are pending in the application.
- 4a) Of the above claim(s) 24-30, 32, 44 and 48-51 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 58-64 is/are allowed.
- 6) ☒ Claim(s) 31, 33, 42, 43, 45 and 55-57 is/are rejected.
- 7) ☒ Claim(s) 34-41, 46, 47, and 52-54 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election without traverse of the invention of Group II, and species (B), stating claims 31, 33-43, 45-47, and 52-64 to read thereon, in the reply filed on 2/13/06 is acknowledged.

2. Claims 24-30, 32, 44, and 48-51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/13/06.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 55 is rejected under 35 USC 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly Point out and distinctly claim the subject matter which Applicant regards as the invention.

The slider protrusion is utilized in the CSS type head parking to prevent stiction. There is no disclosure of its use in the load/unload type parking embodiment.

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This claim is inadequately disclosed under 112 par.1 if read literally to encompass utilizing a slider configuration with a protrusion in the load/unload type head parking system.

Alternatively, this claim is indefinite, misleading, and misdescriptive for failing to accurately set forth the elements involved.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 31 and 42 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by BOUTAGHOU (5,870,265).

Note the figures 1, 3, and 4. BOUTAGHOU shows a disk drive (see figure 1) with a disk having textured data zones (36,37), a textured parking zone (34), and a substantially smooth safe zone (20). The flying height of the head is increased in the safe zone – i.e. on the average there is a greater spacing between the head and the uppermost face portion of the disk. Also note that the recitations of “adjacent” do not require the various zones to have a common boundary.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 43, 56, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over BOUTAGHOU (5,870,265).

BOUTAGHOU shows a disk drive with a magnetic disk having three zones substantially as claimed.

BOUTAGHOU differs in not: (A) utilizing a Hall or MR type head (re claims 43 and 57), and (B) specifying the width of the slider (re claim 56).

Concerning (A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an MR head in the system of BOUTAGHOU. The motivation is as follows: the Examiner takes Official Notice that MR heads are now commonly used in disk drive systems. The statements in BOUTAGHOU about the cost of MR heads no longer apply.

Concerning (B), it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the slider with the width listed in this claim. The motivation is as follows: this would have been the obvious result of routine experimentation and optimization.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over BOUTAGHOU (5,870,265) in view of KAMEYAMA (6,351,345).

BOUTAGHOU shows a disk drive with a magnetic disk having three zones substantially as claimed.

BOUTAGHOU differs in not utilizing a slider having protrusions on the air bearing face.

KAMEYAMA shows the use of protrusions on the air bearing face to reduce stiction (see column 2 lines 53-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of KAMEYAMA to the slider of the disk drive system of BOUTAGHOU. The motivation is as follows: this is a commonly used configuration to prevent slider and disk damage.

12. Claims 33 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over BOUTAGHOU (5,870,265) in view of CHAN et al (5,644,451).

BOUTAGHOU shows a disk drive with a magnetic disk having three zones substantially as claimed.

BOUTAGHOU differs in not utilizing a load/unload type head parking system with a ramp.

CHAN et al shows the use of a load/unload type head parking system with a ramp located adjacent the inner diameter of the disk.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the parking system of CHAN et al in the disk drive of BOUTAGHOU. The motivation is as follows: CHAN teaches that parking the head off the disk improves the performance of the disk drive.

13. Claims 34-41, 46,47, and 52-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach or suggest a magnetic disk having three zones, a data zone, a park/load/unload zone, and a zone configured with a surface to increase the flying height of a slider to greater than that at which it operates over the data zone, where the data zone utilizes the DTR pattern.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert S. Tupper whose telephone number is 571-272-7581. The examiner can normally be reached on Mon - Fri, 6:30 AM - 4:00 PM (first Fri off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "R.S. Tupper".

Robert S Tupper
Primary Examiner
Art Unit 2627

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